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Mature Industries in Massachusetts

Chancellor Joseph Duffey
University of Massachusetts at Amherst

In every era of economic development, one sector of the economy becomes the glamour area. Whether it be steam power or railroads, steel or oil, electronics or plastics, one portion of the economy gets perceived as the panacea for economic ills, the way to survive the present and face the future. Today, high technology is our glamorous sector. Repeatedly we hear that America used to be a farming economy, then it became an industrial economy, and now it is on the threshold of emerging as a knowledge-based, high-technology economy. Although there is some truth in this, I would like to propose that this generalization oversimplifies some economic issues facing Massachusetts and the nation.

In his book on industrial policy, *An Immodest Agenda*, the sociologist, Amitai Etzioni, raises some important questions concerning this generalization which deserve serious consideration here in Massachusetts. Etzioni argues that economists who propose that America cannot maintain a manufacturing base which rests on traditional industrial manufacturing (implying therefore that labor-intensive industries should be shifted to low-wage, developing nations) are overlooking some important points. First, they exaggerate the speed at which a complex industrialized economy can shift from basic to high-technology industries. Also, they underplay important counter trends such as the need to adapt to a new and changing energy environment or the need to assist basic economic foundations such as agriculture and transportation. We in Massachusetts cannot afford to disregard these factors.

Certainly, encouragement and support for new high-technology industries is important. For the Commonwealth, such new industries have been the competitive edge which helped our economy weather the recent recession better than any other major industrialized state. I would also not argue with those who maintain that the service sector will grow faster than the manufacturing sector in the next decade. Nor would I discount any industry's eagerness to produce goods more economically, either through capital improvements including robotics, or by using low-wage foreign based operations. However, I question those who contend that traditional industries should be left to fend for themselves while the government provides supports, including tax benefits and credits, primarily to rapidly expanding sectors of the economy.

That the Massachusetts economic base is changing cannot be disputed. Between 1971 and 1981, employment in the service industries grew 65% from approximately 400,000 to over 660,000. Payroll in this sector grew from 222% from $2.56 billion to $8.23 billion. In comparison, all manufacturing employment grew only 10% from 622,000 to 684,000. Manufacturing payroll grew 135% from $5.22 billion to $12.26 billion. Clearly, the service sector is growing faster than manufacturing. But one point is clear: the manufacturing sector is *increasing* in Massachusetts. Obviously, the balance between the service and manufacturing sectors is changing, but this change is not occurring as rapidly as is generally believed.

The following tables illustrate this point. Tables 1 and 2 present employment and payroll data for the state as a whole, for selected high-technology industrial classifications,* and for a selection of traditional Massachusetts basic industries between 1971 and 1981. These tables highlight the problems faced by selected traditional basic industries. Three of the four industries experienced an absolute decline in employment. Their payrolls (unadjusted for price changes) grew slowly; more so than both the price index or the average for the state as a whole. Their percentage share of all state employment and payroll also declined.

These changes have been fairly large, except for leather products. However, on a yearly basis, the changes are not as great as is generally perceived. Indeed, an employment loss of a little more than one percent a year

*The Standard Industrial Classification (SIC) codes used to identify the high technology sector correspond with those found in *Defining "High Technology" Industries in Massachusetts*, Department of Manpower Development, 1979.

Table 1
Employment for High Tech and Basic Industries 1971-1981

Industry	Employment (#)				Employment (% of All State Employment)		
	1981	1971	#	%	1981	1971	%
Total State	2,324,185	1,848,351	475,834	26%	100.00	100.00	—
Selected High Technology Industries							
Office Computing Machines (a)	34,651	14,254	20,397	43%	1.49	0.77	72%
Chemicals (b)	7,775	9,533	-1,758	- 18%	0.33	0.52	- 19%
Electrical Apparatus (c)	76,556	66,940	9,616	14%	3.29	3.62	- 33%
Scientific Measuring Instr. (d)	25,171	12,836	12,335	96%	1.08	0.69	39%
Computer and Research Serv. (e)	67,176	31,653	35,523	112%	2.89	1.71	118%
Selected Basic Industries							
Textile Mill Products (22)*	24,502	27,437	-2,935	- 11%	1.05	1.48	- 43%
Apparel (23)	39,405	46,936	-7,531	- 16%	1.70	2.54	- 84%
Leather Products (31)	19,523	31,826	-12,301	- 39%	0.84	1.72	- 88%
Fabricated Metals (34)	50,872	39,189	11,683	30%	2.19	2.12	7%
All Manufacturing (20-39)	683,759	622,038	61,721	10%	29.42	33.65	-423%
High Tech Manufacturing (f)	144,153	103,563	40,590	39%	6.20	5.60	60%
All Man — High Tech Man	539,606	518,475	21,131	4%	23.22	28.05	-483%

Table 2
Payroll for High Tech and Basic Industries 1971-1981

Industry	Payroll ($000's)				Payroll (% of All State Employment)		
	1981	1971	$	%	1981	1971	(%)
Total State	33,998,747	13,619,616	20,379,131	150%	100.00	100.00	—
Selected High Technology Industries							
Office Computing Machines (a)	728,124	130,605	597,519	458%	2.14	0.96	118%
Chemicals (b)	168,141	94,116	74,025	79%	0.49	0.69	- 20%
Electrical Apparatus (c)	1,460,695	619,169	841,526	136%	4.30	4.55	- 23%
Scientific Measuring Instr. (d)	496,570	126,909	369,661	291%	1.46	0.93	53%
Computer and Research Serv. (e)	1,544,153	342,115	1,202,028	351%	4.54	2.51	203%
Selected Basic Industries							
Textile Mill Products (22)*	339,167	186,799	152,368	82%	1.00	1.37	- 37%
Apparel (23)	419,204	244,040	175,164	72%	1.23	1.79	- 56%
Leather Products (31)	238,243	195,412	42,831	22%	0.70	1.43	73%
Fabricated Metals (34)	887,501	327,191	560,310	171%	2.61	2.40	21%
All Manufacturing (20-39)	12,261,052	5,224,819	7,036,233	135%	36.06	38.36	-230%
High Tech Manufacturing (f)	2,853,930	970,799	1,883,131	194%	8.39	7.13	126%
All Man — High Tech Man	9,407,122	4,254,020	5,156,102	121%	27.67	31.23	-356%

Notes:
(a) SIC code 357 (b) SIC codes 281, 282, 283 (c) SIC codes 361, 362, 366, 367 (d) SIC codes 381, 382
(e) SIC codes 737, 7391, 7392, 891, 892 (f) High Tech manufacturing is defined as all High Tech minus Computer and Research Services
*# in parentheses are SIC codes

Source: County Business Patterns, Massachusetts, Tables 1A, 1B, 1981, 1971

has occurred. Since the weakest firms in any industry typically face economic demise first, the remaining firms in the state are fairly stong and are adjusting to the changing economic environment. Thus, it should be expected that the future rate of decline will be much smaller than that of the previous decade. Indeed, in the next decade, I would expect stability in these sectors.

Moreover, not all manufacturing is declining in this state. The high-technology sector is growing rapidly, both in employment and payroll. In three of the five selected high-technology subsectors, employment has at least doubled, while payroll has more than tripled. The high-technology sector is the fastest growing part of the state economy. However, not all of the high-technology sector's employment is in the computer and research service area. Most, approximately sixty-five percent, is in the manufacturing aspect of high-technology industries — a point that should not be minimized.

There is a clear relationship between a healthy, growing manufacturing segment of the high-technology sector and the remainder of the manufacturing sector. First, basic industries supply inputs for this sector. It takes metal and plastic products to produce robots and computers. Although in communications the words *far* and *near* may have relatively little meaning, in manufacturing, the transportation of goods and the energy costs required to transport them are still important components of business decisions. In addition, the skill requirements for employees in most aspects of manufacturing are similar. If our manufacturing base is neglected, then the Commonwealth's ability to retain and attract skilled labor for all types of manufacturing, including high tech, may be reduced. This could, in turn, reduce the growth potential for all industry in this state.

Finally, even though some basic industries are declining, all segments of the manufacturing sector (including manufacturing not associated with the high-tech industry) grew both in employment and payroll during 1971-81. Granted, the growth rate was slow and the share of total state employment and payroll assignable to all manufac-

turing declined. However, the decline amounted to less than 0.5% of the total state employment or payroll per year. This is not a revolutionary change. Instead, manufacturing in Massachusetts is slowly evolving toward a new form in which high-tech manufacturing plays an important, but not exclusive role. Indeed, I would expect that those industries associated with high-technology manufacturing will be growth industries in the future — and many of these are our basic and mature industries.

Do not misunderstand my point about the importance of firms in the slowly declining or evolving manufacturing sector. It is important to encourage new and growing industries. But given the continued importance of non-high-tech manufacturing — it still accounts for approximately one-fourth of the state's employment — it is neither practical nor desirable to ignore such traditional or mature industries. They will be with us for decades to come, providing an important area for employment, production, and income-earning exports.

I am arguing against limiting assistance and incentives to the fast - growing industrial sectors. By limiting assistance we choose one side, the "accelerationist" side, of the industrial policy debate. We would be trying to pick only "winning" industries and provide them with appropriate subsidies. However, "preservationists," like Felix Rohatyn, believe in maintaining the mature industrial base. They argue that not only is it difficult to "pick only winners," but it is impossible to determine the length and breadth that expansion in an industry will bring to a state. Will the stars burn out quickly without expanding far enough to replace mature, nonsubsidized sectors? Although our data do not tell how long the high-tech expansion will continue, they do tell us that the older industries of the Commonwealth have yet to be totally eclipsed — and probably will not be for a long time, if ever.

How we imagine the future is, of course, colored a great deal by how we perceive the present, how we define the world that we inhabit. For example, consider printing and publishing, an industry which has contributed substantially to the economic history of this state. When publishing is redefined as a component of the information industry, a solid member among our mature industries suddenly becomes part of the new growth sector called knowledge-based industries. Computers are the essence of this new industry, but their hardware is the product of fairly routine manufacturing. Similarly, robotics is a growing new industry, yet the arms of robots are made of metal beams. And the metal workers who manufacture them will be trained, no doubt, by the people who have manufactured bicycles and automobiles. In short, I think there are more similarities than differences between mature and new industries than most people imagine.

But perhaps no issue of perception is as important as the conceptual terms in which people think about the economy itself. Much of the writing about "postindustrial" America is based on a three-sector view of the economy. The primary sector comprises agriculture and mining; the secondary sector manufacturing; and the third services. In most of the predictions that one reads, the primary sector will decline first and most; manufacturing will be the next to go; while the service sector, with its knowledge-based industries, will expand rapidly. This scenario for the future makes perfect sense if some variables are not included in the planning equation.

There are at least two variables which deserve serious consideration. The first is energy. Energy production is not a service industry, nor is it knowledge based (although it rapidly incorporates technical advances). We as a nation will need to drill more oil wells. We will need to mine more coal. While these industries will foster technical innovations, they are basically object industries which require skilled blue collar workers.

A second variable exists closer to home. That is the neglect of our economy's infrastructure. While dramatic increases in communications have shrunk distances in certain ways, it is misleading to conclude that picture phones, conference calls, and data phones will replace travel. Some executives may be travelling less in 1990, but our transportation needs will not diminish significantly. Raw materials and finished goods will not be transported by satellite telephones. They will require modern seaports, well-maintained railways and good roads. Because this sector of our economy has been allowed to deteriorate, rebuilding the state's infrastructure will require major investments in construction — and construction is a very traditional industry.

The conclusions to be drawn from all this are relatively simple. In coming decades, the state's economy will include strong elements of both mature industries and high technology. Like agriculture before it, traditional manufacturing may play a lesser role than it once did in our communities. Like agriculture, traditional manufacturing will be transformed by new technologies. But it will not disappear. On the contrary, it will remain an important source for employment. In places it will need to be retooled and restructured. It will need and deserve the support of government and education. While newer industries can and should be encouraged, that encouragement should not come at the expense of traditional industries.

The Massachusetts Information Scanning Unit (MISU)

Salvatore M. Meringolo
Head, MISU and Business Reference Librarian

The School of Management and the University Library are pleased to announce the formation of a new service, the Massachusetts Information Scanning Unit (MISU). This service offers the business community direct access to the University Library system's extensive information resources. In addition to over two million volumes, 13,000 serial subscriptions, a complete government document depository, and numerous special collections, MISU has information resources that extend far beyond the university.

MISU is an external information provider

Information is frequently cited by the business press as one of the primary ingredients in strategic management. "Information" is used very loosely to describe a vast array of resources; thus, various classifications have been developed. For the businessperson it is useful to categorize information into two types: internal and external.

Internal information is generated within the firm itself; it can refer to inventory levels, accounts receivable, sales, comparative earnings statements, human resource assets, etc. External information is not directly controlled by the firm, but may indeed influence corporate performance or direction. Industry trends, profiles of competitors' patent filings, foreign trade opportunities, or the shifting consumer characteristics within particular markets are all regarded as external information.

Businesses typically gather external information through contacts with suppliers, clients, salespeople, or trade associations. In addition, firms may read a few business or trade journals with some regularity. It is puzzling that many firms are willing to allocate considerable resources to what have been referred to as "introverted" MIS systems, but devote little attention to the systematic capture of strategic external information already in the public domain.

The Massachusetts Information Scanning Unit is dedicated to this neglected resource; that is, the systematic pursuit of published information. A sampling of statistics illustrates the enormous scope of this information domain:

- Approximately 25,000 government documents are are published annually.
- An estimated 60,000 government sponsored research reports are published annually.
- Over 40,000 business or business related articles are written each year.
- Approximately 65,000 patents are granted and published each year.
- Annual engineering and technological literature comprises about 100,000 items.
- Approximately 1,000,000 annual science citations are indexed in one database alone.
- An estimated 7,500 announcements are published each month describing products or services that the federal government needs or offers.
- Approximately 500,000 statistical series are available on domestic and international industry, trade, and economics.

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The MISU service agenda features four major components. First, MISU offers extensive computerized information searches. MISU currently employs over 200 data bases representing a wide variety of information types. Again, data base searching permits customized, systematic, and thorough scans through millions of information pieces.

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For further information about the Massachusetts Information Scanning Unit, contact Salvatore Meringolo, Head, Massachusetts Information Scanning Unit, Rm. 501 Goodell, University of Massachusetts, Amherst, MA 01003. Telephone: (413) 545-4299.

The January 1984 Massachusetts Economic Policy Analysis (MEPA) Economic and Tax Revenue Forecasts

Roy Williams, James Kindahl and Margaret Larson*

The January economic forecast for 1984-1986 depicts an incomplete recovery from the severe recession of the early 1980's. Employment is expected to rise by moderate amounts, bringing unemployment down from the high rates of 1982 and 1983 (7.9% and 6.9%, respectively). Yet, the forecast shows the annual rate dropping only to a low point of 5.9% in 1985, then rising slightly to 6.1% in 1986. These rates are quite high in comparison with past recovery periods, but are well below comparable national rates, as has been the case since 1980. A strong expansion in employment in the manufacturing sectors is predicted to peter out by 1985, with a slight

*Associate Director, Director, and Research Assistant, respectively, of the MEPA project, Economics Department, University of Massachusetts, Amherst, MA 01003. (Tel. 413-545-0915). Technical assistance from John Lanzillo, MEPA staff. Support from the Department of Public Welfare, the Division of Employment Security, the Department of Commerce and Development, the Boston Redevelopment Authority, and Massport. National inputs from CONTROL122483 and HARDLANDING122883 from Data Resources, Inc.

decline in 1986; the rate of increase in nonmanufacturing employment is predicted to be somewhat above the rate of growth of the labor force in 1984, slightly above in 1985, and virtually the same in 1986. The combination of these two broad forces reduces the unemployment rate by nearly a full percentage point in 1984 compared with 1983, and very slightly in 1985. By 1986, the slow growth in nonmanufacturing employment will be unable to compensate for the decline in manufacturing employment, and the unemployment rate will begin to rise once again.

On the brighter side, the relatively low rates of inflation of the past two years are seen as continuing, being at annual rates in the four to five percent range throughout the forecast period. These rates are certainly high by historic standards (excluding periods of wartime); but they are lower than those of any year since 1973, and less than half that of any of the years 1979, 1980, and 1981. Both personal income and personal disposable income are predicted to rise by more than the inflation rate, leading to increases in aggregate real income in both definitions. Expressed as per-capita disposable income (a measure of welfare of individuals, not a measure of the strength of the aggregate economy), a substantial rise of 2.8% is expected for 1984, with lesser increases of 1.5% and 0.3% for 1985 and 1986, respectively. While these rates cannot be considered large sustained rises, it is certainly a more attractive picture than the three-year periods 1974-1976 and 1979-1981, when real disposable income per-capita actually fell.

A more detailed look at the employment picture shows rather large percentage increases in durable manufacturing for 1984 (a rise of over 6% compared with 1983), then a slackening off in 1985, and a decline in 1986. The strong growth for 1984 is shared by all of the sectors, led by the normally volatile Transportation Equipment sector. Two of the three sectors of greatest importance to Massachusetts, Nonelectrical Machinery and Electrical Equipment are predicted to be among the strongest of the durable manufacturing sectors. The third major sector in Massachusetts, Instruments, is disappointingly ranked among the weakest of the durable goods industries.

The expected performance of nondurable goods manufacturing is poorer than that expected for durable goods manufacturing, continuing the historic relationship. The nondurables group as a whole will expand only moderately in 1984, hardly at all in 1985, and decline slightly in 1986. Food processing and Leather are predicted to be the weakest, as they have been for a number of years, declining in all three forecast years. Textiles will continue to enjoy the moderate growth made during 1983 into 1984, but then will fall back into long-term decline by later 1985. Of the nondurables group, only Paper, Chemicals, and Rubber will still have positive growth by 1986.

In the nonmanufacturing sector, which accounts for some 76% of total nonagricultural employment in Massachusetts, the recovery is predicted to be less than that of manufacturing in 1984, though the rates of expansion in 1985 and 1986 will be more favorable than those in manufacturing. The strong surge of manufacturing in 1984 will diminish to much slower growth in 1985 and 1986; whereas the weaker surge in nonmanufacturing employment will diminish by substantially smaller amounts than manufacturing. Thus, manufacturing employment is predicted to rise by nearly 5% in 1984, then rise by less than 1% in 1985, and fall in 1986 by about 0.5%; whereas nonmanufacturing is predicted to rise by only a little more than 2% in 1984, but to taper off no further than to 1.7% growth in 1985 and 1.2% growth in 1986. This relative pattern tends to reflect the historical cyclical phenomenon that manufacturing employment is substantially more volatile than nonmanufacturing employment and reflects also the long-term relative shift (which began in the 1920's) of employment from manufacturing to nonmanufacturing industries.

Within the nonmanufacturing sector, the biggest percentage increase is in Contract Construction — an increase which reflects partly the sharp nationwide decline in this sector in the past two years. Even with high predicted growth rates for 1984-1986, the average rate of growth for this industry since 1981 is not especially high. Two industries, Services and Federal Government are both seen as having moderately high (though diminishing) rates of growth. State and Local Governments, Wholesale and Retail Trade, and Finance, Insurance and Real Estate sectors will all have rather low rates of growth, while Transport and Public Utilities will grow slowly in 1984, then decline in 1985 and 1986.

To sum up the employment picture: the improvement which might be expected after the severe revere recession of the early 1980's is expected to be short-lived, lasting only through 1984. Only small increases in employment — smaller than the increases expected in the labor force — will continue through 1985 and 1986. In consequence, the unemployment rate will shrink in 1984, but no further improvement is in sight. In spite of this, real personal incomes will continue to rise, as some of the benefits of economic recovery go to raise wages of those who are employed, rather than to decrease unemployment.

This forecast agrees with those of other analysts in predicting a fairly vigorous recovery for the state for the next three to five quarters, but is relatively pessimistic about the longer term. This forecast will be superseded very soon now by a forecast incorporating the annual rebenchmarking of state industrial employment data. This will improve the starting points for many industries, but may not affect the long-term growth paths as significantly. Readers inclined to dismiss our long term predictions as too pessimistic are reminded that the MEPA Model correctly predicted the state's very healthy recovery from the deep recession of the mid-70's at a time when other observers were still gloomy. The factors of industrial mix and competitive advantage in wages were the correct reasons for optimism then; they continue to play the central role in the future of Massachusetts' economic health, and these factors are less favorable for Massachusetts than they were earlier. The potential for long-term economic stagnation should not be overlooked.

January Control Forecast

Summary Report
Massachusetts Economic Policy Analysis Model
(Units as Indicated)

	1983	1984	1985	1986	1984:1	1984:2	1984:3	1984:4
Employment — Total Nonag.*	2616	2688	2727	2749	2666	2683	2695	2706
% Change	-.2	2.7	1.5	.8	4.0	2.5	1.8	1.5
Manufacturing*	618	648	653	650	642	648	650	652
% Change	-3.0	4.9	.8	-.5	6.8	4.1	1.5	.9
Non-Manufacturing*	1998	2040	2074	2099	2025	2035	2045	2054
% Change	.6	2.1	1.7	1.2	3.1	2.0	2.0	1.7
Unemployment Rate**	6.9	6.0	5.9	6.1	6.2	6.0	6.0	5.9
Employment Rate Index**	101.9	104.1	105.3	105.8	103.4	104.0	104.4	104.7
% Change	-1.0	2.2	1.1	.5	3.5	2.1	1.5	1.2
Relative to U.S. Index**	102.8	102.1	101.6	101.1	102.3	102.2	102.1	101.9
Rate of Wage Change	6.2	4.1	4.4	5.2	3.2	3.8	4.5	5.0
Wage Index Rel. to U.S.**	95.7	96.2	96.1	96.2	96.2	96.2	96.2	96.1
Avg. Weekly Hours in Mfg.	40.0	40.4	40.3	40.2	40.5	40.5	40.4	40.3
Rate of Price Inflation	4.2	4.4	4.7	5.1	3.9	4.8	4.6	4.6
Relative to U.S. CPI**	95.8	95.8	95.9	96.1	95.7	95.8	95.9	95.9
Personal Income (mil$)	74024	79534	84829	90326	77797	78869	80094	81376
% Change	5.9	7.4	6.7	6.5	7.7	5.6	6.4	6.6
Disposable Income (mil$)	62413	67164	71546	75571	65793	66643	67604	68617
% Change	7.0	7.6	6.5	5.6	7.3	5.3	5.9	6.1
Real Per Cap. D.I. Index**	110.1	113.1	114.9	115.2	112.9	112.9	113.2	113.6
Relative to U.S.**	106.2	106.1	105.3	104.6	106.5	106.2	106.0	105.7
Rel. Business Cost Index**	96.2	96.5	96.5	96.6	96.5	96.5	96.5	96.5
Manufacturing**	95.4	95.6	95.6	95.7	95.6	95.6	95.6	95.6
Non-Manufacturing**	96.6	96.9	96.9	97.0	96.9	96.9	96.9	96.9

*Thousands of people.
**Indexes equal 100 in calendar 1973.

Massachusetts Business and Economic Report

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MASSACHUSETTS BUSINESS AND ECONOMIC REPORT

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Associated Industries of Massacahusetts: The Voice of Industry on Beacon Hill

William J. McCarthy
Vice President and General Counsel
Associated Industries of Massachusetts

In 1915, a dozen manufacturers gathered at the Copley Plaza Hotel in Boston. They were concerned that the needs and concerns of the manufacturing community were not adequately represented on Beacon Hill and determined the need for an association that would be the "voice of industry" to a government that was shaping laws and regulations affecting the economic future of the Commonwealth. From that first meeting, the Associated Industries of Massachusetts (AIM) was born.

Today, AIM represents 2,600 industrial and technology-based employers throughout the Commonwealth. According to AIM's bi-laws, the manadate of the organization has continued to be "to improve the economic climate of Massachusetts in the public interest; to advocate fair and equitable public policies affecting the interests of its members and their employees; to inculcate equitable principles among its members and between its members and their employees; and to acquire, possess, and disseminate useful information to and for its members; and generally to promote the welfare of its members and their employees and the prosperity of the Commonwealth and its industries."

Over the years, this task has become increasingly complex with the growth of government and the abundance of laws and regulations on advanced technology industries. Many of the nearly 10,000 bills now filed in the state legislature affect the cost and manner of doing business in Massachusetts. AIM monitors these bills and maintains a strong presence on Beacon Hill throughout the legislative hearing and debate process.

With the return of Michael Dukakis as governor, a new policy-making process came to the fore: consensus policy making. It achieved its first major success last year with the enactment of the state's new "Right-to-Know" law. While the new process does not lend itself to all situations, it does have potential for some. Workers' compensation reforms and an acceptable plant closing policy are probable examples. But consensus policy making cannot be applied to all situations, and must be pursued realistically when its application is appropriate.

The state's new "Right-to-Know" law is a prime example of consensus policy making. When Governor Dukakis signed the law on November 4, 1983, he gave Massachusetts the nation's most comprehensive statute relating to disclosure of hazardous and toxic substances in the workplace. Unlike many regulatory statutes, this law — Chapter 470 of the Acts of 1983 — applies to all public and private employers, thus making the state both regulator and regulated.

The new Massachusetts Right-to-Know law represents a major effort by a business community coalition, spearheaded by the Associated Industries of Massachusetts, to halt the passage of an extraordinarily harsh bill initially passed by the state senate, and to bring about a sensible resolution of a major legislative problem.

The emotion and intensity surrounding the bill both inside and outside the legislature were unparalleled. As a result, compromise could be achieved only by the combined efforts of all interested parties, working with the governor's office to draft a bill that made sense for Massachusetts.

In general, Chapter 470 is considered a workable approach to an emotional concern of many workers and community residents. Indeed, Massachusetts developed a showcase law through the combined efforts of many who participated in the final adoption of the compromise bill. These included key members of the governor's team who worked on the various drafts, the members of the legislature who approved it, the AFL-CIO Solidarity Coalition's team which worked on the drafts, and the members of the United Business Coalition, which in addition to AIM, included the New England Legal Foundation, the Massachusetts Business Roundtable, and the Massachusetts High Technology Council.

A number of major issues that AIM is watching in the current legislative session appear to be heading toward a similar process of discussion, negotiation, and compromise.

Plant Closing Legislation: An Anathema to Investment Capital

Plant closing legislation has been filed in Massachu-

setts in each of the past several years. It has never been reported favorably out of committee or reached the floor of either branch of the legislature for debate. Industry opposition has and will continue to be opposed unalterably to this legislation.

While the bills may vary somewhat, each calls for some period of advance notification by a Massachusetts business of any closing or major layoff. Some bills provide for payment of severance benefits to affected employees and/or similar payments to affected cities and towns, and all provide sanctions for violation. Investors perceive any form of state-mandated plant closing legislation as a "charge" on the mobility of capital investment. Further, any such "charge" on the mobility of capital investment will retard capital formation and, consequently, will hinder the creation of private sector jobs in Massachusetts.

A recent study for the Federal Reserve Bank of Boston showed that, with unencumbered capital mobility, employment in Massachusetts rose 17% during 1975-1980, compared with an 11% national average. Replacement of the moribund textile, shoe, and leather industries with technology-based operations accounted for this trend, which also led to a 40% rise in new openings during the same period. The Fed study concluded that the economic ideas underlying plant closing legislation contravene conventional economic thought and that plant closing legislation would retard new capital formation.

In recognition of this issue, the Governor in 1983 established his Commission on the Future of Mature Industries to study the problems attributed to the decline of mature industries in Massachusetts. Its immediate principal purpose is to develop acceptable strategies to deal with the complex and controversial issues associated with statutorily mandated advance notification of business closings or major layoffs.

The Commission, which includes business, industry, labor, citizen, and legislative participants, is working with adequate funding and staff resources to develop a broad industrial policy plan to help stabilize and revitalize the Commonwealth's mature industries. The centerpiece of the Commission's recommendations is expected to be a plan for mandated advance notification that will offer an alternative to Massachusetts bill H.3408, which is adamantly opposed by business and industry. Such a plan will meet the needs and concerns implicit in advance notification bills without endangering the state's growth and the development of new jobs.

Any advance notification statute poses many disadvantages, which, in themselves, can prove counterproductive by forcing troubled businesses to close their doors rather than to pursue opportunities that might save themselves and the jobs that they provide. Once mandatory notice is given, workers, especially younger, highly skilled employees, can be expected to depart in search of new jobs. Creditors would close in to protect investments; suppliers would seek new sources; and the operation itself would soon collapse. Older workers or those with obsolete skills — those most in need of help and whom we most seek to protect — would suffer the greatest harm.

Because economic disadvantages, business and industry opposition, and constitutional questions have proved so formidible, no state has adopted plant closing legislation since 1974. Before 1974, only Wisconsin and Maine had enacted even limited plant closing statutes. And in both states the laws were not nearly as harsh as those proposed in H.3408. In fact, the Wisconsin statute has never been enforced, although it has repeatedly received legal challenges. The Maine statute is even less restrictive and applies only where there is a closing and an actual relocation 100 miles or more from the original site.

Any form of state-mandated plant closing or layoff notification would be the singlemost negative and counterproductive economic policy that Massachusetts could pursue. Passage would be tantamount to erecting signs along the state's borders stating: "No Investment Wanted — Massachusetts Has Enacted Policies Detrimental to the Free Market System and Has Imposed a Charge on the Mobility of Capital."

AIM will continue to vigorously oppose any mandatory advance notification bills and to cooperate with the governor's task force in the development of realistic solutions to the concerns expressed by the cosponsors of H.3408 and other advance notification bills.

Task Force Reviewing Workers' Compensation System

Another issue of major concern to Massachusetts employers that should be addressed this year involves the spiralling costs and attendant problems of the State's Workers' Compensation System. All of the nearly 100 bills filed in 1983 on this issue were referred to the Governor's Task Force on Workers' Compensation, which has held hearings throughout the past several months. Our most fundamental observation about the workers' compensation program in Massachusetts accords with most observations that have emerged at the hearings: the program is terribly costly and is generally perceived as unacceptably inefficient and ineffective. To be remedied, it should be unraveled entirely; its problems and administrative inefficiences identified and corrected; and its costs stabilized and made more competitive.

That must be the focus and plan of action for the task force. It is the only sure way to provide what we are all searching for: a sound, enduring program that, at stable and competitive costs, achieves quick and adequate payments to injured workers, quality medical care up-front, effective and efficient rehabilitation services, and the elimination of delays and other abuses. That is the kind of program that workers and employers expect and deserve, and that the Governor envisioned when he commissioned the task force. Other states — Florida, Minnesota, and Rhode Island, for example — have made major changes in their laws toward these ends. Massachusetts can and must do the same.

In our view, cost is unquestionably the root cause of the problem. It colors the perceptions and heightens the frustrations that most hold toward the program. The cost of workers' compensation in Massachusetts is too high — in fact, oppressive — and is increasing at a frightening pace. What is more, neither the users, i.e., employers and employees, nor the state's policy makers fully understand the problem's causes so that appropriate stabilizing adjustments can be made.

From 1972 to 1982, the cost of workers' compensation in Massachusetts tripled. But more alarming is the total premium cost for workers' compensation insurance, which, excluding self-insurance, rose from $493 million in 1982 to $614 million in 1983, a 24% increase in one year *without any intervening statutory benefit increase.* Costs are now running at $50 million a month or $12.5 million a week. And this excludes a $39 million increase pending before the Insurance Commissioner, which, if approved, would bring the total to $160 million for the period. Unless checked significantly, the cost of workers' compensation could reach the dangerously unaffordable level of $1 billion per year in three or four years.

Unless the Commission addresses these issues, the program's soaring costs will prove counterproductive and will weaken a healthy economy. One final example of runaway costs: The 1982 spouses' death benefit increase, not reflected in the 1983 rates referred to above, costs $39 million a year, yet is based on an assumption of only *122* death cases per year.

In addition to our above recommendations, we propose that the workers' compensation system incorporate the following reforms:

- designation of workers' compensation as the exclusive remedy for all injuries arising from employment
- more expeditious but equitable discontinuances upon the submission of competent medical evidence (This is not current policy in Massachusetts although it is the law in most other states.)
- modernization of the Industrial Accident Board's administration through the following improvements:
  - *integration and coordination of overlapping benefit programs for the same disability*
  - *creation of a clear, statutorily imposed definition of "causal relationship" between the work environment and disabilities*

Hopefully, reports by the Governor's Commission on Mature Industries and the Task Force on Workers' Compensation will accord with industry thinking. It is anticipated that 1984 will see major efforts to reach a satisfactory consensus on both issues, especially workers' compensation. As we work our way through what most expect to be a short legislative year because of the upcoming elections, AIM will continue to monitor and participate in the ongoing dialogue on these and other issues.

1984 Advanced Executive Program

The School of Management's 1984 Advanced Executive Program will take place at the University of Massachusetts Amherst campus on September 24-28, October 11-13, October 25-27, and November 13-15. Designed for upper-level managers who seek a broadened background and understanding of general management practice, the program's fourteen days of seminars will comprise lectures, case studies, group discussions, and interactive team exercises. Seminars will explore such topics as financial planning and control, corporate planning and strategic policy, management support systems, competitive strategy, market analysis, information systems, and political and economic issues. In addition to distinguished members of the School of Management's graduate faculty, seminar leaders and speakers will include the following specialists from the business community:

Henry Claycamp, former corporate planner, International Harvester
Rick and Jean Driscoll, Driscoll Consulting Group
Edward Fields, Financial Consultant, Old Bridge, N.J.
Thomas C. Gunn, Manager, Arthur D. Little
James Harking, Vice President of Marketing, Mohawk Data Sciences
William Rothschild, Staff Executive, General Electric
Sidney Schoeffler, Executive Secretary, Strategic Planning Institute
Raymond Stumberger, Manager, General Electric
Deborah Williams, Monarch Life Insurance

Small Business and Big Labor

H. Richard Hartzler
Professor of Business
Clarkson College
Potsdam, NY

In an ostensibly big business environment, it is easy to overlook the importance of small business to our economy. Big business attracts nationwide news coverage throughout the media. Other enormous social institutions, including big labor unions, also divert attention from small business. In the news, small businesses attract merely local interest. Indeed, small business advocates face an uphill struggle in reminding us of the impressive benefits that small businesses bring to us all. We need to remember these benefits to appreciate the gravity of the many threats that big business, government, and labor impose upon small businesses.

Recently, *Dun's Business Month* reported that, from 1976 to 1980, small businesses created most of the nation's new jobs and developed twice as many new products as big businesses. At the same time, new small electronics firms created 100 times as many jobs as did older firms while putting new products into the market one year sooner than large firms were able to do [1]. Employing 35% of the nation's private, nonagricultural workforce, small businesses produce 48% of the nation's gross business product [2]. Over the long haul, mature companies generate new jobs at 0.6% annually. Even the innovative ones manage only 4.3%, while young small businesses, which invest $12 billion annually in start-up costs, produce new jobs at 40.7% annually [3]. These are 1976 figures. Imagine how much bleaker the recent recession would have been if, before it, from 1969 to 1976, small businesses had not added 9.5 million new employees to the labor force compared with large firms' contribution of 75,000.

In responding to threats from big business, government, and labor, small business has been more than holding its own. Contrary to images suggesting that big businesses are gobbling up or smothering small businesses, large firms have not had the growth of small businesses [4]. As for government, the burdens of regulation have been measured in terms of cost compliance. In 1976, compliance costs totaled $62.3 billion. Although these costs place a greater relative burden on small businesses, they still have produced remarkable econom-

ic results [5]. However, unions pose a more ominous problem. At the moment, 18% of the workforce is unionized. By 1995, according to a forecast by the California-based Institute for the Future, 26% of all workers will be unionized [6]. In itself, this growth is no dark cloud casting a shadow over small business. Rather, the forecast asserts that union growth will occur predominantly inside new conglomerates, which perhaps will have fed on young high-technology companies and others. Not a thought is given to the consequences that these enhanced organizing efforts may pose for small businesses.

The future of small businesses might prove bright if they only could contend with unions on an equal power basis. However, small businesses face formidible disadvantages because national and international unions are so large. Let us take the word of the Institute for the Future that union organizing will become more effective, but let us not take its word that huge conglomerates alone will be the targets of union efforts. The recent past points to a different trend. Labor organizing efforts have been directed at smaller and smaller firms, where 35% of the labor force is employed. These firms have little power to prevail against a union once it is recognized or certified as the collective bargaining agent. The growth of unions to include 26% of the labor force will probably occur in small firms.

The coexistence of unions with small firms is not a problem unless power is unequal. Federal labor law presupposes a continuing war between management and labor. To ensure that battles are fought fairly, the law imposes a referee — the NLRB — and a balance of power on the combatants [7]. Because the balance has been fashioned to accommodate big business and big labor, many small businesses must play by the big boys' rules. In spite of collective small business market figures, most small businesses individually have have limited market power and political resources to battle activist groups like unions at collective bargaining tables, or in the Congress and state legislatures [8]. Thus, the equation is out of balance.

Failure to balance power carefully between small businesses and unions can seriously impair the ability of small firms to continue to provide the benefits described above. Regardless of what a highly visible corporate giant might do on the national level, small businesses, unnoticed, are more deeply involved in promoting the quality of life in communities. If they cannot function well, the quality of life in communities will deteriorate [9].

In a competitive market a small business will fail quickly if the jobs that it created are occupied by workers who withold their labor. Failure so brought on is one of the risks that can accompany protection of workers' legitimate interests. Perhaps labor should possess such power. Small businesses may readily close their doors and move away, thereby destroying those very jobs upon which workers depend. However, this train of thought can lead to the misperception that small businesses have the capacity of big businesses to close or move a plant while organization continues to function profitably. For many small businesses, to close is to die, while to move is to exhaust a substantial part of investment capital.

Unions do withold their labor, usually to force an improvement in wages or working conditions. But, when to achieve such ends, labor is withheld as part of a strategy to exert product market and price controls over small businesses, unions can force antitrust law violations, from which they are generally exempt from prosecution. Four kinds of market interference have been practiced on small, highly competitive businesses. First, by refusing to work for companies that would otherwise engage in price competition, unions have prohibited price cutting to the detriment of consumers. Second, when they have been the sole source of workers, unions have blocked market entry by withholding labor from new entrants. Third, by withholding labor, unions have restricted the services that a firm can supply at a given price to a customer. Finally, by refusing work, unions have forced allocation of geographic markets so that no business can infringe on the areas of other businesses with which they would otherwise compete [10].

Although some small firms are willing accomplices, others, so induced to violate the law, resist. Forced violations of the law reflects a great imbalance of power, which Congress has not remedied. In a few cases the Supreme Court has blocked similar tactics [11], but the four practices persist. Power should be balanced with responsibility: not just among giants, but among giants and the small. In the relationship between unions and small businesses, much responsibility is demanded with those of little power by those with great power and little responsibility. This is a serious problem that should be studied and adequately remedied by special labor-management laws.

Not only are some small businesses adversely affected by the balance of power struck among big unions and big businesses, but many business-union relationships are completely outside federal law. Approximately 95% [12] of the 97% [13] of American businesses that are small employ fewer than 20 workers and depend on the local community for their primary market. To benefit from the Taft-Hartley Act, a business must sell a minimum of $50 million in products across state borders or purchase a minimum of $1 billion in products from out of state. Otherwise, these are left to the protection of state governments, whose leaders should themselves work to redress power imbalances that parallel those on the federal level.

Gullett and Powell [14] urge small businesses to increase their political power and thus improve their balance of power with big businesses and governments at all levels. Small businesses must also enhance their balance of power with big unions. In these undertakings small businesses and their supporters cannot afford to delay.

Notes

(1) As reported in *USA Today*, 31 Jan. 1984, p.2, sec B.

(2) According to *Dun's Business Report*, small business accounts for 35% of private business employment. The United States Small Business Administration's Office of Advocacy reports the 48% gross national business product. See Bramblett and Flewellen, "The Small Business Development Center Program for Georgia" *AACSB Bulletin*, Vol. 14, no. 3, Spring 1978, p. 23.

(3) Morse and Flanders, *The Role of New Technical Enterprises in the U. S. Economy*, U. S. Dept. of Commerce, Washington D. C., January 1976.

(4) Edmunds, "An Alternative Small Business Growth Model for the U. S. Economy," *THE WORLD OF SMALL BUSINESS: PROBELMS AND ISSUES*, 24th Annual Conference, International Council for Small Business, Federal Business Development Bank, Montreal, Canada, 1979, pp. 34.1 — 34.18.

(5) Hartzler, "Changes in the Legal Regulation of Small Firms," *MASSACHUSETTS BUSINESS AND ECONOMIC REPORT*, Vol. 8, no. 2., Fall 1980, pp. 4-5 Davis, et al *BUSINESS AND SOCIETY*, McGraw-Hill, 4th ed., 1980, p. 278. DeFina, "Public and Private Expenditures for Federal Regulation of Business," Working Paper No. 22, Center for the Study of American Business, Washington University, St. Louis, Mo., November 1977, p. 3.

(6) As reported in *USA Today*, 31 January 1984, p. 1, sec. B.

(7) Taylor and Witney, *LABOR RELATIONS LAW*, 4th ed., Prentice-Hall (1983).

(8) Gullett and Powell, "The Power-Responsibility Equation: A Second Look for the Small Business," *UNIV. OF MICH. BUS. REV.*, Jan. 1977, pp. 7-10.

(9) Taylor and Witney, p. 394.

(10) Taylor and Witney, p. 123.

(11) *United Mine Workers of American* v. *James M. Pennington*, 381 U. S. 657, 1965, Pennington v. United Mine Workers, 257 F. Supp. 815, 1966.

(12) Taylor and Witney, p. 394.

(13) Bramblett and Flewellen, note 2.

(14) *U. of Mich. Bus. Rev.*, note 8.

The April 1984 Massachusetts Economic Policy Analysis (MEPA) Economic and Tax Revenue Forecasts

Roy Williams, James Kindahl and Margaret Larson*

The April MEPA forecast presents very much the same picture as did the January forecast of vigorous growth in the state economy lasting only through the end of the year. Substantial upward revision in reported employment growth in several nonmanufacturing sectors across 1983 makes quarterly industry employment totals much more consistent with last year's healthy drop in the state unemployment rate. The industrial data revisions from three more months and recent data and changes in the DRI forecast of the national economy combine to produce the following noteworthy changes in the MEPA forecast for Massachusetts: (1) substantial improvement in the estimate of the present *level* of employment in several of the nonmanufacturing sectors, and hence in total industry employment; (2) slightly more predicted *growth* in nonmanufacturing employment through the forecast period, 1984-1986; (3) an earlier and slightly lower peak in manufacturing employment followed by a somewhat more pronounced decline; and (4) lower predicted unemployment rates throughout the forecast period.

Employment in Massachusetts fell during the national recession of 1981-1982, hitting its low point in the second quarter of 1982. Its level has been rising each quarter since then, and is expected to continue to rise through the rest of the decade, though at decreasing rates. As in the January forecast, substantial improvements are predicted for 1984 only with a fourth quarter total expected to be 2.6% above that of the fourth quarter at 1983. By the end of 1986, employment will increase annually at just 0.5%. The growth in employment through 1984 should be greater than the growth of the labor force, causing a decline in the unemployment rate; but throughout 1985 and 1986, labor force growth will be about the same as employment growth, thus maintaining the unemployment rate essentially unchanged just above 5%. Massachusetts will still continue to experience significantly lower unemployment rates than the U. S. as a whole. The index of real per capita disposable income, perhaps the best single indicator of the economic welfare of individuals, is predicted to increase only slightly after 1984.

For many years, manufacturing employment has been declining as a proportion of total employment both in Massachusetts and in the rest of the U. S. In most recent years Massachusetts employment has even declined in absolute numbers. The long-term decline in the state has been largely the result of geographic shifts of production in a number of important nondurable goods, notably textiles, apparel, leather and leather products, and paper. Years ago, nondurable good manufacturing was the most important sector in the Massachusetts economy in terms of employment. In 1984, only a little more than one-third of the employment in manufacturing (and less than one-twelfth of total employment) is in nondurables. In the current recovery period it has recovered only a fraction of its recession losses. It should decline again before the end of the year and continue declining for the foreseeable future. Having recovered from its steep cyclical declines by 1984, durable goods manufacturing should reach a peak in the first quarter of 1985, then resume a more gradual long-term decline. Within the subcategories of durable manufacturing, there should be little change in employment levels; the electrical equipment sector should decline somewhat, partially counterbalanced by small increases in employment in nonelectrical machinery (which includes the high-tech electronics industries).

Virtually all future net growth in the economy's employment will come from nonmanufacturing sectors, in particular from contract construction, wholesale and retail trade, the finance and insurance sectors, government, and, above all, the service sector. Among all the nonmanufacturing sectors, only the transportation and public utilities sector, will decline, and this will be relatively small.

*Associate Director, Director, and Research Assistant, respectively, of the MEPA Project, Economics Department, University of Massachusetts, Amherst, MA 01003. (Tel. 413-545-0915). Technical assistance provided by John Lanzillo, MEPA staff. Support from the Department of Public Welfare, the Division of Employment Security, the Boston Redevelopment Authority, the Massport. National inputs from CONTROL032684, OPTIM033084 and HARDLANDING033084 from Data Resources, Inc.

April Control Forecast

Summary Report
Massachusetts Economic Policy Analysis Model
(Units as Indicated)

	1984	1985	1986	1984:1	1984:2	1984:3	1984:4	1985:1
Employment — Total Nonag*	2754	2804	2830	2719	2750	2766	2780	2791
% Change	3.1	1.8	.9	1.6	4.8	2.3	1.9	1.7
Manufacturing*	647	648	640	641	648	650	651	651
% Change	3.7	.1	−1.2	4.4	4.2	1.4	.6	−.2
Non-Manufacturing*	2106	2156	2189	2078	2103	2117	2129	2141
% Change	2.9	2.3	1.6	.8	4.9	2.6	2.3	2.3
Unemployment Rate	5.3	5.1	5.2	5.8	5.3	5.1	5.1	5.0
Employment Rate Index**	107.3	108.8	109.5	106.1	107.3	107.8	108.2	108.5
% Change	2.6	1.4	.6	1.1	4.2	1.9	1.5	1.3
Relative to U.S. Index**	105.5	105.4	104.9	105.2	105.6	105.6	105.5	105.5
Rate of Wage Change	4.8	5.0	6.0	4.2	5.3	5.0	4.3	4.8
Wage Index Rel. to U.S.**	95.4	95.8	96.1	95.2	95.4	95.5	95.5	95.6
Avg. Weekly Hours in Mfg.	40.4	40.2	40.1	40.4	40.4	40.3	40.3	40.2
Rate of Price Inflation	5.4	5.3	5.6	7.6	5.1	5.4	5.2	5.2
Relative to U.S. CPI-U**	96.4	96.5	96.7	96.4	96.4	96.4	96.5	96.5
Personal Income (mil$)	80435	86138	92013	78145	79849	81252	82494	83975
% Change	8.2	7.1	6.8	5.4	9.0	7.2	6.3	7.4
Disposable Income (mil$)	68134	72902	77219	66271	67670	68794	69799	71166
% Change	8.6	7.0	5.9	5.7	8.7	6.8	6.0	8.1
Real Per Cap. D.I. Index**	114.2	115.7	115.8	113.4	114.2	114.5	114.6	115.3
Relative to U.S.**	106.3	106.0	105.5	105.9	106.7	106.5	106.3	106.2
Rel. Business Cost Index**	94.8	95.1	95.3	94.7	94.8	94.9	94.9	94.9
Manufacturing**	95.2	95.4	95.6	95.1	95.2	95.2	95.2	95.3
Non-Manufacturing**	94.7	94.9	95.2	94.5	94.7	94.7	94.7	94.8

*Thousands of people.
**Indexes equal 100 in calendar 1973.

Massachusetts Business and Economic Report

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